

REMARKS

The subject matter of independent claim 13, as amended, relates to a method of transmitting information in an optical communications network from a start node to a target node, while incorporating both working and protection channels for carrying that information in a cost-effective manner. Nodes in the optical communications network utilize wavelength selective optical cross-connects utilizing a reduced number of optical switching matrices compared with known solutions. The claimed method provides a mechanism for providing both working and protection channels using the reduced number of switching matrices.

Claim 13 has been amended to specify that the wavelength selective optical cross-connects have one or a single switching matrix for switching wavelength channels of each wavelength. Various other minor wording amendments have been made to the claim to enhance its clarity. The working and protection channels are implemented on different wavelengths in order that they utilize different switching matrices in each node. This means that should one of the switching matrices fail, at least one of the working or protection channels is still available through one of the other switching matrices. This is despite the fact that there is only one switching matrix per wavelength in the start and target nodes.

Turning to the prior art, Feuer describes a WDM multi-cast server arrangement in which the multi-cast group is changed using a wavelength selective cross-bar switch. This reference is not concerned with implementing protection using separate working and protection channels. In particular there is no disclosure of the switching matrices used within the various nodes, except for the wavelength selective cross-bar switch in the multi-cast server. For example, there is no disclosure that each node (e.g., 301, 303) comprises a number of optical switching matrices, one for

each wavelength. Furthermore, while the nodes are described as dropping two wavelengths, these two wavelengths are not modulated with the same information. By contrast, one of the wavelengths carries multi-cast data, and the other wavelength carries uni-cast data. The skilled person would not be motivated to consider protecting information carried by this network using different wavelength channels as the only protection considered is that inherent in the ring architecture of the network. The focus of Feuer by contrast is directed at the problem of alleviating the transmission bottleneck at the sending server when multi-casting. This is unrelated to the subject matter now claimed by amended claim 13, and therefore it is submitted that amended claim 13 is not obvious over this reference.

Graves describes a protection arrangement for an optical switching system including a number of wavelength selective optical switching matrices. The reference describes a complicated arrangement of switching matrices and additional protection switches. For example, an additional switching matrix 14 is used to protect the various wavelength specific switch matrices 12A-12M in Figure 2. It is to be noted that the reference is only concerned with the architecture of the switching arrangement and how to provide protection for failures within the switching arrangement; but not the overall network. For example, there is no disclosure of a start node, a target node, or intermediate nodes within an optical communications network. There is no disclosure of how protection of channels transmitted across such a network might be implemented. Furthermore, it is to be noted that the inclusion of additional switching matrices teaches against the approach of amended claim 13 which utilizes a single wavelength selective switching matrix for each wavelength channel. It is therefore submitted that amended claim 13 is not obvious in view of this reference.

There does not appear to be any motivation or suggestion to combine the teachings of Feuer and Graves. Even if these were combined they teach the addition of switching matrices to implement protection rather than minimizing the number of switching matrices used as taught in the present application. Thus any combination of Feuer and Graves teaches against the approach claimed in amended claim 13, and it is therefore submitted that this claim is not obvious in view of these citations.

It follows that dependent claims 14-18 are also novel and non-obvious in view of Feuer and Graves.

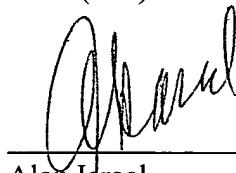
It is believed that this application as now amended is in order for allowance.

Petition is hereby made for a one-month extension of the period to respond to the outstanding Official Action to February 9, 2008. A check in the amount of \$120.00, as the Petition fee, is enclosed herewith. If there are any additional charges, or any overpayment, in connection with the filing of the amendment, the Commissioner is hereby authorized to charge any such deficiency, or credit any such overpayment, to Deposit Account No. 11-1145.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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